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SUPERSEDING
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DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION SPECIFICATION

RACK, CABINET AND OPEN FRAME TYPES

1. SCOPE

1.1 Scope.- The racks covered in this specification are of two basic configurations, (1) ventilated steel cabinets with access doors (rear, or front and rear), and (2) open frame racks having no enclosure cabinet. Both configurations have vertical uprights drilled and tapped for mounting standard 19 inch slotted rack panels. The racks specified herein are intended for supporting and/or enclosing small units of electronic equipment, such as receivers, speech amplifiers, control units, rectifiers, and similar units which are assembled on rack panels.

1.2 Classification.- This specification covers five types of racks which differ in dimensions, configuration and hardware. The following "Type" classification terms are used hereinafter to distinguish requirements applicable to each Type of rack:

Classification Term	Description	Panel Space*
Type I	Cabinet Rack, 76 inch, Rear Door	70 inches
Type II	Cabinet Rack, 42-3/4 inch, Rear Door	36-3/4 inches

Classification Term	Description	Panel Space*
Type III	Cabinet Rack, 83 inch, Rear Door	77 inches
Type IV	Cabinet Rack, 83 inch, Front and Rear Doors	77 inches
Type V	Open Frame Rack, 83 inch, (no enclosure)	77 inches

*Design-center panel capacity, based on the 1-3/4 inch panel-size module.

2. APPLICABLE DOCUMENTS

2.1 FAA standard.- The following FAA standard, of the issue specified in the invitation for bids, forms a part of this specification and is applicable to the extent specified hereinafter:

FAA-STD-012 Paint Systems for Equipment

2.2 Other Government publications.- The following Government publications, of the issues in effect on date of invitation for bids, form a part of this specification, and are applicable to the extent specified hereinafter:

Handbook H28 Screw-Thread Standards for Federal Services
MIL-STD-454 Standard General Requirements for Electronic Equipment; Requirement 9 (only)

(Copies of this FAA specification, and of the applicable FAA standard, may be obtained from Federal Aviation Administration, Washington, D.C. 20590, ATTN: Contracting Officer. Requests should fully identify material desired, i.e., the specification number, date, amendment number, standard number, date; also, requests should state the contract number or other use to be made of the material.)

(Requests for information on obtaining copies of Handbook H28 should be directed to Superintendent of Documents, Government Printing Office, Washington, D. C. 20401.)

(Single copies of the referenced Military document may be obtainable from Federal Aviation Administration, Washington, D. C. 20590, Attention: Contracting Officer. Requests should cite the invitation for bids, request for proposals, or the contract involved. Note that mail requests, if found acceptable, will be forwarded to a Military supply depot for filling, hence ample time should be allowed.)

(Information on obtaining copies of the referenced Federal document may be obtained from General Services Administration offices in Washington, D. C., Seattle, San Francisco, Denver, Kansas City, Mo., Chicago, Atlanta, New York, Boston, Dallas, and Los Angeles.)

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3. REQUIREMENTS

3.1 Equipment to be furnished by contractor.- Each rack and optional item furnished by the contractor shall be complete in accordance with all specification requirements. The contractor shall furnish the quantities specified in the contract schedule of the various types of racks as identified by "Type" classification terms (1.2), together with the optional items called for in the contract schedule for specific rack Types.

3.1.1 Applicability of requirements.- Sections 1, 2, 4, 5, and 6 hereof apply to all rack Types, unless exceptions are specified, or unless the requirements of individual paragraphs cannot be applied to a particular rack Type due to its basic design (for example, paragraphs relating to doors cannot be applied to the open-type rack, Type V). Paragraphs 3.3 to 3.7 and subparagraphs apply to specific Types, and include listings of applicable general paragraphs (3.8 series), applicable figures, and available options. Paragraphs 3.8 and subparagraphs are requirements applying generally to all types, but with exceptions which are noted; the optional items are included in this group. Detail requirements applicable to each rack Type and the optional items are shown on various figures on the attached drawings D-5731-1, D-5731-2, D-5731-3, D-5731-4, and D-5731-5; and fig. 27.

3.2 Definitions

3.2.1 Rack.- The term "rack", as applied to Types I to IV cabinet-type racks, shall be construed as meaning the steel enclosure with door(s), and shall include all assembled parts and pieces covered in the text and applicable drawings in this specification exclusive of optional items. The term "rack" also describes the complete Type V open frame rack. Note that use of the earlier terminology "relay rack" is deprecated, although it is synonymous.

3.2.2 Optional items.- As applied in this specification the term "optional" shall be construed to mean certain accessory installations and square duct openings, as listed and described herein, which shall be furnished by the contractor only when called for in the contract schedule.

3.2.3 Left-hand and right-hand.- All references herein and on the attached drawings to "left-hand" and "right-hand" shall apply when the racks are viewed from the rear, and when facing closed rear doors.

3.3 Type I Cabinet Rack

3.3.1 Configuration.- The Type I rack shall be a 76 inch steel cabinet with front uprights drilled and tapped for standard rack panel mountings, and with a single door at the rear provided with openings for natural ventilation (adaptable for optional forced ventilation). Two square duct openings are provided in the top, and the bottom has a foot-square opening.

3.3.2 Options available.- The following options are available for the Type I rack, and shall be furnished when so specified in the contract schedule:

OPTION	REFERENCE PARAGRAPHS
Plug-in strip, furnished and installed	3.8.14.1 to 3.8.14.3, 3.8.14.6, 3.8.14.7
Blower, furnished and installed	3.8.15 to 3.8.15.19
Side square duct openings with cover plates, furnished and installed	3.8.13.1, 3.8.13.3, 3.8.13.6
Rear square duct opening with cover plate, furnished and installed	3.8.13.1, 3.8.13.3, 3.8.13.5

3.3.3 Hardware.- Each Type I rack shall be furnished complete with the following items (for Table I, see pages 25 to 28):

1 each - Corner trim (fig. 18) except without knob

1 each - Front trim (fig. 19) except without knob

2 each - Trim knob and attachment hardware (Table I, Items 3 & 4)

100 each - Panel mounting screws (Table I, Item 1)

8 each - Hole plug (3.8.12.1)

1 each - 2 ounce can matching brown touch up enamel

8 each - Tie bolt, nut and lock washer (Table I, Items 11, 12, 13)

3.3.4 Applicable general requirements.- The following general requirements paragraphs shall apply to the Type I rack:

3.8 to 3.8.9.3.1
3.8.9.3.3 to 3.8.9.5.4
3.8.10.1
3.8.10.3 to 3.8.11.1
3.8.11.3 to 3.8.12.1

3.3.5 Applicability of drawing figures.- The following figures on the attached D-5731 series of drawings shall apply to the Type I rack:

D-5731-1: Figures 1, 2, 3, 4; Table III
D-5731-2: Figures 5, 7, 7a, 8
D-5731-3: Figures 9, 11, 12, 13A, 13B, 13C, 14
D-5731-4: Figures 15 through 22, inclusive.

3.4 Type II Cabinet Rack

3.4.1 Configuration.- The Type II rack shall be a 42 inch steel cabinet with front uprights drilled and tapped for standard rack panel mounting, and with a single door at the rear provided with openings for natural ventilation (adaptable for optional forced ventilation). A foot-square opening is provided in the bottom.

3.4.2 Options available.- The following options are available for the Type II rack and shall be furnished when so specified in the contract schedule:

OPTION	REFERENCE PARAGRAPHS
Plug-in strip, furnished and installed	3.8.14.1, 3.8.14.2, 3.8.14.4, 3.8.14.6, 3.8.14.7
Blower, furnished and installed	3.8.15 to 3.8.15.19
Side square duct openings with cover plates, furnished and installed	3.8.13.2, 3.8.13.3, 3.8.13.6
Rear square duct opening with cover plate, furnished and installed	3.8.13.2, 3.8.13.3, 3.8.13.5

3.4.3 Hardware.- Each Type II rack shall be furnished complete with the following items:

1 each - Left hand corner trim (fig. 18) except without knob

1 each - Right hand corner trim (fig. 18) except without knob

1 each - Front trim (fig. 19) except without knob

3 each - Trim knob and attachment hardware (Table I, Items 3 & 4)

50 each - Panel mounting screws (Table I, Item 1)

6 each - Hole plug (3.8.12.1)

1 each - 2 ounce can matching brown touch-up enamel

6 each - Tie bolt, nut and lockwasher (Table I, Items 11, 12, 13)

3.4.4 Applicable general requirements.- The following general requirements paragraphs shall apply to the Type II rack:

3.8 to 3.8.9.2
3.8.9.3.2 to 3.8.9.5.3
3.8.9.5.5
3.8.10.1
3.8.10.3 to 3.8.10.7
3.8.11.2 to 3.8.12.1

3.4.5 Applicability of drawing figures.- The following figures on the attached D-5731 series of drawings shall apply to the Type II rack:

D-5731-1: Figures 1 (except omit door stiffener), 2, 3; Table III
D-5731-2: Figures 5, 7, 7a, 8
D-5731-3: Figures 9, 11, 12, 13A, 13B, 13C, 14
D-5731-4: Figures 16 through 22, inclusive

3.5 Type III Cabinet Rack

3.5.1 Configuration.- The Type III rack shall be an 83 inch steel cabinet with front uprights drilled and tapped for standard rack panel mounting, and with a single door at the rear provided with openings for natural ventilation (adaptable for optional forced ventilation). Two square duct openings are provided in the top, and the bottom has a foot-square opening.

3.5.2 Options available.- The following options are available for the Type III rack, and shall be furnished when so specified in the contract schedule:

OPTION	REFERENCE PARAGRAPHS
Plug-in strip, furnished and installed	3.8.14.1, 3.8.14.2, 3.8.14.5 to 3.8.14.7
Blower, furnished and installed	3.8.15 to 3.8.15.19
Side square duct openings with cover plates, furnished and installed	3.8.13.1, 3.8.13.3, 3.8.13.6
Rear square duct opening with cover plate, furnished and installed	3.8.13.1, 3.8.13.3, 3.8.13.5

3.5.3 Hardware.- Each Type III rack shall be furnished complete with the following items:

1 each - Corner trim (fig. 18) except without knob

1 each - Front trim (fig. 19) except without knob

2 each - Trim knob and attachment hardware (Table I, Items 3 & 4)

100 each - Panel mounting screws (Table I, Item 1)

8 each - Hole plug (3.8.12.1)

1 each - 2 ounce can matching brown touch up enamel

8 each - Tie bolt, nut and lock washer (Table I, Items 11, 12, 13)

3.5.4 Applicable general requirements.- The following general requirements paragraphs shall apply to the Type III rack:

3.8 to 3.8.9.3.1
3.8.9.3.3 to 3.8.9.5.4
3.8.10.1
3.8.10.3 to 3.8.11.1
3.8.11.3 to 3.8.12.1

3.5.5 Applicability of drawing figures.- The following figures on the attached D-5731 series of drawings shall apply to the Type III rack:

D-5731-1: Figures 1, 2, 3, 4; Table III
D-5731-2: Figures 5, 7, 7a, 8
D-5731-3: Figures 9, 11, 12, 13A, 13B, 13C, 14
D-5731-4: Figures 15 through 22, inclusive

3.6 Type IV Cabinet Rack

3.6.1 Configuration.- The Type IV rack shall be an 83 inch steel cabinet with front and rear doors, each provided with openings for natural ventilation (adaptable for optional forced ventilation), and having interior upright channels drilled and tapped on both sides for standard rack panel mountings. Two square duct openings are provided in the top, and the bottom has a foot-square opening.

3.6.2 Options available.- The following options are available for the Type IV rack, and shall be furnished when so specified in the contract schedule:

OPTION	REFERENCE PARAGRAPHS
Plug-in strip, furnished and installed	3.8.14.1, 3.8.14.2, 3.8.14.5 to 3.8.14.7
Blower furnished and installed in rear door	3.8.15 to 3.8.15.19
Side square duct openings with cover plates, furnished and installed	3.8.13.1, 3.8.13.3, 3.8.13.6
Rear square duct opening with cover plate, furnished and installed	3.8.13.1, 3.8.13.3, 3.8.13.5

3.6.3 Hardware.- Each Type IV rack shall be furnished complete with the following items:

100 each - Panel mounting screws (Table I, Item 1)

8 each - Hole plug (3.8.12.1)

1 each - 2 ounce can matching brown touch up enamel

8 each - Tie bolt, nut and lockwasher, (Table I, Items 11, 12, 13)

3.6.4 Applicable general requirements.- The following general requirements paragraphs shall apply to the Type IV rack:

3.8 to 3.8.9.3.1
3.8.9.3.3 to 3.8.9.5.4
3.8.10.1
3.8.10.3 to 3.8.10.7
3.8.12.1

3.6.5 Applicability of drawing figures.- The following figures on the attached D-5731 series of drawings shall apply to the Type IV rack:

D-5731-1: Figures 1 (part), 2 (part), 3, 4; Table III
D-5731-2: Figures 6, 6a, 7 (part), 7a, 8
D-5731-3: Figures 10, 12, 13B, 13C, 14
D-5731-4: Figures 15, 16, 17, 20

3.7 Type V Open Frame Rack

3.7.1 Configuration.- The Type V rack shall be an 83 inch open frame type rack with upright channels drilled and tapped for standard rack panel mounting.

3.7.2 Hardware.- Each Type V rack shall be furnished complete with the following items:

100 each - Panel mounting screws (Table I, Item 1)

1 each - 2 ounce can matching brown touch up enamel

4 each - Tie bolt, nut and lock washer (Table I, Items 11, 12, 13)

3.7.3 Applicable general requirements.- The following general requirements paragraphs shall apply to the Type V rack:

3.8 to 3.8.4.3
3.8.5 to 3.8.6.2
3.8.8 to 3.8.8.5
3.8.10.2, 3.8.10.3, 3.8.10.4, 3.8.10.6

3.7.4 Applicability of drawing figures.- The following figures on the attached D-5731 series of drawings shall apply to the Type V rack:

D-5731-5: Figures 23 through 26, inclusive

3.8 General requirements

3.8.1 Workmanship

3.8.1.1 Military standard.- Workmanship shall be in accordance with MIL-STD-454, Requirement 9.

3.8.2 Finishes

3.8.2.1 Rack finish schedule.- Rack finishes shall be in accordance with the Finish Schedule, Table II.

Table II Finish Schedule

Rack Class	Portion of Equipment	Finish Reference
Type V	Overall	3.8.2.2
Types I, II,III	Trim strips, clips, spacer (overall)	3.8.2.2
Types I, II, III, IV	Vent plate, exterior side Blower mounting plate, exterior side Square duct closing plate, exterior side Hole plugs Rack exterior (not otherwise listed) Blower assembly (overall) Door interior Vent plate, interior side Blower mounting plate, interior side	3.8.2.2
	Square duct closing plate, interior side Rack interior (not otherwise listed)	3.8.2.2
	Plug-in strip and straps Circuit breaker housing	3.8.2.2, or *
	Trim knob Other hardware	3.8.11.3 Table I

3.8.2.2 Brown finish.- Where the finish schedule (Table II) calls for this paragraph, surfaces shall be prepared in accordance with FAA-STD-012, and shall be finished by applying one or more uniform spray coats of a baking primer, mixed, applied, and baked in accordance with FAA-STD-012; such baking shall be followed by application of one or more uniform spray coats of a hard lusterless alkyd baking enamel having a smooth matte texture, mixed, applied, and baked on in accordance with FAA-STD-012 and TT-E-527, with exception of the units of gloss. The units of gloss of the matte finish, when measured, shall be between 10 and 17 units using Federal Test Method Standard No. 141a, Method No. 6103 (85-Degree Specular Gloss) as the basis for compliance. The color of the final coat shall be brown, matching Color No. 30372 of Federal Standard No. 595. The contractor shall furnish certification that metal test panels, finished along with the equipment as specified above, have been tested for water resistance and hydrocarbon resistance, using (text of paragraph continued on page 11)

* Contractor's option: May be standard off-shelf finish (neutral colors such as gray or buff; or black)

the test procedures given in Federal Specification TT-E-527, have successfully met the qualitative requirements specified in TT-E-527, have been tested in accordance with Method No. 6103 of FED-STD-141a and have successfully met the testing requirements of Method No. 6103 obtaining the results as specified herein. Square duct closing plates shall be finished prior to installation thereof. Care shall be exercised in spraying the fronts of the panel mounting elements, to avoid excessive paint deposits in the tapped holes.

3.8.3 Construction

3.8.3.1 Method of construction.- All fabricated steel equipment covered by this specification shall be of welded construction throughout. No screws, bolts, rivets or similar devices shall be utilized for structural purposes.

3.8.4 Welding

3.8.4.1 Welding preparation.- All surfaces to be welded shall be free of oxidation and foreign matter; i.e., slag, grease, oil, and paint. A filler rod shall be used that is compatible with the chemical and physical properties of the parent metal. All welds shall be of uniform size in accordance with the best welding practices. Welds having insufficient deposit, undercut, porosity, nonfusion, flux inclusions, or showing other signs of poor workmanship, will be rejected. When material is permanently secured by spot-welding there shall be a sufficient number of welds to provide adequate strength with no less than two welds per joint. All welds shall be thoroughly cleaned prior to painting, galvanizing, or any other method of preservation or finish.

3.8.4.2 Welding application.- The type, location, and number of welds shall be in accordance with the best current standards of metal rack construction.

3.8.4.3 Fusion welding.- Fusion welding, such as gas, arc, etc., shall not be utilized on metals less than 0.059 inch in thickness. Where fusion welding is utilized on exterior surfaces, whether or not covered by trim, said surfaces shall be ground sufficiently smooth so that the welding will be nearly imperceptible after the paint finish has been applied.

3.8.4.4 Spot welding.- Spot (resistance) welding shall be utilized for all applications except where butt, fillet, and corner welds are required. Spot welding shall be used, for example, to attach the panel mounting angles and channels to the sides; to attach the flanges of the top and bottom pieces to the sides; to attach the door hinges.

3.8.5 Accuracy of fabrication

3.8.5.1 Dimensional Tolerances.- Standard commercial tolerances on metal thickness and door handle dimensions shall apply. Except where otherwise noted all other tolerances shall be ± 1/32 inch.

3.8.5.2 Rack trueness.- Racks shall be plumb relative to the floor line within ±0.5°, and shall have opposite sides parallel and adjacent sides at

right angles to each other, without twist or warp in cross section and having similar uniform dimensions in such a degree as will insure freedom from the effects of undue strain, when bolted together side-by-side, such as might result in jamming of the door and door catch. The front surfaces of the two panel mounting angles or channels (figures 5 & 6) shall be coplanar.

3.8.5.3 Screw threads.- All tapped machine screw holes, machine screws, and nuts shall be threaded class 2A/B Unified Thread Series and shall meet the requirements of Bureau of Standards Handbook H28.

3.8.5.4 Axial trueness, panel mounting-screw holes.- The axis of each panel mounting screw hole shall be true within one degree of a normal to the surface of the panel mounting element.

3.8.5.5 Squareness, panel mounting screw holes.- The vertical center line through the 10-32 tapped panel mounting holes in the left-hand panel mounting element (3.8.6.1) shall be, at the top hole, within 1/8 inch of a line erected at the center of the bottom hole in the same element normal to the horizontal center line joining that hole with the bottom hole of the right-hand panel mounting element. This perpendicularity requirement shall also apply to the vertical center line of the right-hand panel mounting holes.

3.8.6 Structural elements

3.8.6.1 Panel mounting elements.- Panel mounting angles and channels (symbol Q, Table III) shall be fabricated from rolled bar size mild steel angle, or formed from cold rolled steel as specified in 3.8.6.2.

3.8.6.2 Rack members other than panel mounting elements.- Rack members other than panel mounting elements, such as sides, top, bottom, door, gussets, base plates, shall be fabricated from ASTM A366 Cold-Rolled Carbon-Steel Sheets, Commercial Quality, unless otherwise noted.

3.8.7 Hardware

3.8.7.1 Mounting hardware.- Mounting hardware shall be as listed in Table I, pages 25 to 28, unless the contractor finds that some minor variation in construction detail makes a change advisable, in which case he shall obtain Government approval before proceeding with the proposed change.

3.8.7.2 Accessory hardware.- See subparagraphs under each rack type (3.3 to 3.7).

3.8.8 Nameplate

3.8.8.1 Nameplate location.- Each rack shall have a nameplate in accordance with drawing B-21216H. The nameplate shall be centered on the 3/16" x 2" x 21-3/4" strip (fig. 1) or on the 3 3/8 x 2 x 3/16 (fig. 25) channel, on the top front of the rack.

3.8.8.2 Nameplate titles.- The nameplate titles for the five types of racks

shall be as listed below:

Rack Classification Term (see 3.8.8.3)	Nameplate title
I	CABINET RACK-76"-REAR DOOR
II	CABINET RACK-42 3/4"-REAR DOOR
III	CABINET RACK-83"-REAR DOOR
IV	CABINET RACK-83"-TWO DOORS
V	OPEN-FRAME RACK - 83"

3.8.8.3 Nameplate type designations.- The type designations for each type of rack on the contract shall be obtained from the Contracting Officer under each individual contract. Note that the specification classification terms (1.2, Type I, II, etc.) shall not be used on the nameplate.

3.8.8.4 Serial numbers.- Serial numbers shall start with 1 for each rack having an individual type designation and continue consecutively up to the total number of such rack units on the contract.

3.8.8.5 Contractor's nameplate drawing.- Before manufacturing the nameplates, the contractor shall submit his detailed manufacturing drawing of the nameplate to Federal Aviation Administration, Washington, D. C. 20590, Attention: Contracting Officer, for checking of entries and other requirements. The drawing shall be in complete detail showing all entries, except that the rack type designation, if not known to the contractor, may be omitted. In such case, the type designation will be assigned when the checked drawing is returned to the contractor.

3.8.9 Doors

3.8.9.1 Door clearance.- Clearance between door and cabinet shall insure the best compromise between closeness of fit and ease of opening and closing without scraping.

3.8.9.2 Vent plates.- Two each perforated vent plates (fig. 8) shall be provided and installed in each door (see 3.8.15.2 for an exception applicable when an optional blower installation is specified).

3.8.9.3 Door catch mechanism

3.8.9.3.1 Three-point door catch (Types I, III, IV).- A three-point door catch (cam and two rods) shall be installed. The cams and rods shall nest against the inner edges of the rack members (metal shall not be cut away from the rack members for this purpose).

3.8.9.3.2 One-point door catch (Type II).- A one-point door catch (cam only) shall be installed.

3.8.9.3.3 Door catch operation.- The door catch shall be designed and constructed so as to function smoothly and to lock securely, avoiding, when locked, rattle of its members or of the door when the rack is subjected to vibration. Stops shall be provided to limit the rotation of the spindle to that required for operation of the catch.

3.8.9.4 Door handle.- The door handle shall be of the full grip lever type, brass or bronze, free from pits, lumps and other surface irregularities, chromium plated and polished. The shape and dimensions shall conform with fig. 16. Alternatively to the foregoing requirements, the door handle shall be Yale and Towne Part No. S-1411-1/2G, chromium plated and polished; or equal.

3.8.9.4.1 Door handle position.- With the door closed and the catch locked, the door handle shall hang downward in a vertical position. The door handle shall rotate clockwise to unlock the catch and open the door.

3.8.9.4.2 Attachment of door handle.- The door handle shall engage the catch mechanism by means of a square shank (as shown on fig. 16) in a square hole, or by means of two 1/4"-20 or larger hardened steel set screws seating into drilled holes in the shaft, or by other means assuring equally positive engagement without possibility of slippage. The means of retaining the assembly in operating position shall be secure against loosening, utilizing nut/s locked up against split lockwasher/s or equivalent. A stainless steel washer or shoulder bushing shall be provided to prevent the door handle from rotating in contact with the painted outside surface of the door.

3.8.9.5 Door hinges

3.8.9.5.1 Type and size of hinge.- The door hinges shall be of the loose-joint fixed-pin bullet-tip wrought steel type, left-hand (left half of hinge having fixed pin with exposed portion of pin extending upward), 1-7/8" to 2-1/8" length (not including bullet tips), 1-5/8" to 1-3/4" width (opened), metal gauge 0.068" to 0.077", pin diameter 0.115" minimum, no holes, meeting additional special requirements specified hereinafter. The basic hinge shall be Hinge NHBLT802 (Left Hand), Plain Steel, No Holes, Not Swaged for Surface Application, manufactured by Stanley Hardware, Division of the Stanley Works, New Britain, Conn.; or equal.

3.8.9.5.2 Hinge attachment.- Hinges shall be attached to doors and cabinets by means of spot welding. The pin portion of the hinge shall be attached to the cabinet.

3.8.9.5.3 Sleeve opening.- The sleeve opening of each hinge on the door shall be countersunk (included angle 60°; diameter at surface of sleeve 3/16") to facilitate pin engagement.

3.8.9.5.4 Door hinges; pin lengths (Types I, III, IV).- The pins of the top and bottom hinges shall be of equal length. The pins of the remaining two hinges shall be progressively shortened in increments of 1/16 inch beginning with the second hinge from the top, i.e., the pin of the second hinge shall be 1/16 inch shorter than that of the top hinge and the pin of the third shall be 1/8 inch shorter than that of the top hinge.

3.8.9.5.5 Door hinges; pin lengths (Type II).- The pins of the top and bottom hinges shall be of equal length. The pin of the center hinge shall be 1/16 inch shorter than the top pin.

3.8.10 Convenience outlets

3.8.10.1 Convenience outlet installation (Types I, II, III, IV).- Two duplex convenience outlets (Table III-U) shall be installed in the rack (figs. 1 and 3; Table I: Items 14 to 22).

3.8.10.2 Convenience outlet (Type V).- A duplex convenience outlet shall be mounted in the turned up base plate edge as shown on Fig. 25.

3.8.10.3 Convenience outlet receptacles.- The convenience outlet receptacles shall be bakelite, duplex, 3-wire polarized grounding type (grounding contacts internally connected to supporting bridge and to ground wire terminal screw); parallel slots with double-sided contacts, to fit standard 2-wire parallel-blade caps as well as 3-wire grounding caps having parallel blades with U-shaped grounding blade; four line terminal screws plus grounding terminal screw; rated 15 amperes 125 volts; industry No. 5262 (plaster ears not required).

3.8.10.4 Front convenience outlet box.- The front convenience outlet box shall be the rectangular type having basic size dimensions 4-1/8" x 2-1/8" x 2-1/8" deep. Mounting screws shall coincide with the outlet mounting.

3.8.10.5 Rear convenience outlet box.- The rear convenience outlet box shall be the 4" octagon type, depth 2-1/8" (basic size dimensions). Mounting screws are not required to be concealed under the outlet box cover (3.8.10.6).

3.8.10.6 Outlet covers.- Convenience outlet covers, of the type normally used with surface-mounted rectangular outlet boxes, shall be applied on the outside of the rack over both front and rear convenience outlets.

3.8.10.7 Convenience outlet wiring.- Line and ground terminals of front and rear convenience outlets shall be interconnected with three AWG 12 insulated wires (two line, one equipment ground), N.E.C. Type MC metal-clad cable, with cable-box connectors at each end. There shall be no connection from ground (rack frame) to either line terminal. The cable shall be routed along the left-hand side of the rack and secured to the bottom thereof by one clamp held in place by a machine screw (Table I, Items 23, 24), tapped into the bottom of the rack. The screw head shall be inside and the end of the screw shall be flush with the bottom surface of the rack. Also see 3.8.15.18, and fig. 27 (page 29).

3.8.11 Trim strip details

3.8.11.1 Trim strip formation (Types I, III).- Trim strip shall be as shown on figures 18, 19, 21, 22, and in Table III (R, S, T).

3.8.11.2 Trim strip formation (Type II).- Trim strip shall be as shown on figures 18, 19, 21, 22 and in Table III (R, S, T) except that the top end

of each trim strip shall be formed over and welded closed in such a manner as to present a neat appearance and to conceal the inner surfaces of the trim strip when viewing the rack from above with the trim in place.

3.8.11.3 Trim strip knob.- The trim strip knob shall be brass or bronze, free from surface pits, lumps and irregularities, chromium plated and polished, similar in design and shape to P. & F. Corbin Company catalog number 1570 knob, except scaled down to a diameter of 17/32 inch and a projection of 1/2 inch.

3.8.11.4 Installation of trim clips.- Trim clips shall be installed by the contractor (fig. 1).

3.8.12 Hole plugs

3.8.12.1 Hole plugs (Types I, II, III, IV).- Hole plugs (for the rear rack tie bolt holes) shall be General Cement Mfg. Co., Rockford, Illinois, catalog number 1711-BE for a 5/16 inch diameter hole; or equal. Hole plugs shall not be installed.

3.8.13 Square duct facilities

3.8.13.1 Square duct openings and mounting holes (Types I, III, IV).- Where square duct openings are specified herein as a mandatory item or are called out as a required option (see 3.2.2), for a rack Type I, III, or IV, the openings shall be 4 by 4 inches. The square duct mounting holes shall conform in size and location to the holes in Square D Company 4 by 4 inch square duct trough collars, except that for side or rear duct openings, the bottom mounting holes shall be omitted. Drilling layouts are shown on fig. 7.

3.8.13.2 Square duct openings and mounting holes (Type II).- Where side or rear square duct openings are called out as a required option (see 3.2.2) for a Type II rack, the openings shall be 2-1/2 by 2-1/2 inches. The square duct mounting holes shall conform in size and location to the holes in Square D Company 2-1/2 by 2-1/2 inch square duct trough collars, except that the bottom mounting hole shall be omitted.

3.8.13.3 Closing plates.- All square duct openings shall be provided with closing plates installed. The following references and illustration apply:

Closing plate, Types I, III, IV: Fig. 7a.

Closing plate, Type II: Fig. 7a; details in 3.8.13.2.

Mounting hardware, Table I: Items 8, 9, 10, 40 to 45.

3.8.13.4 Top square duct openings.- Top square duct openings are mandatory for Types I, III, and IV racks, as shown in fig. 4 (see Table III-F).

3.8.13.5 Optional rear square duct opening.- When specified as an option for Types I, II, III, IV racks, a square duct opening shall be provided

below the rear door. The following references and illustrations apply:

Types I, III, IV: Table III-E; Fig. 3; details on Fig. 7.

Type II: Table III-E; Fig. 3; details in 3.8.13.2.

3.8.13.6 Optional side square duct openings.- When specified as an option for Types I, II, III, IV racks, a square duct opening shall be provided in each side of the rack at the bottom. The following references and illustrations apply:

Types I, III, IV: Table III-J; Fig. 2; details on Fig. 7.

Type II: Table III-J; Fig. 3; details in 3.8.13.2.

3.8.14 Optional plug-in strip installation

3.8.14.1 Plug-in strip installation.- When called out as a required option (see 3.2.2) for a specific rack Type, a plug-in strip installation with circuit breaker equipment shall be provided in accordance with the following group of subparagraphs (3.8.14 series).

3.8.14.2 Plug-in strip mounting.- The plug-in strip and the circuit breaker equipment listed hereunder shall be assembled and mounted on the right-hand side of the rack, in accordance with fig. 7, using hardware items 25 to 28, Table I (also see 3.8.14.7(c)). Mounting holes in the accessory mounting bracket shall be tapped. The main body of the plug-in strip shall be screwed to the accessory mounting bracket or secured by straps screwed to the bracket. Snap-in supporting clips are not acceptable for this purpose.

3.8.14.3 Plug-in strip (Type I).- The plug-in strip (rated 15 A 125 V) shall provide ten grounding-type (wire ground) outlets at intervals of 6 inches. It shall be one of the following, or equal: National Electric RCF2GW-606-6 series equipment as shown on Fig. 14 (Porter Electrical Division, Porter Building, Pittsburgh, Pa.), or Plugmold Kit for Racks, Drawing ED-30750-1 (The Wiremold Co., Hartford, Conn. 06110).

3.8.14.4 Plug-in strip (Type II).- The plug-in strip (rated 15 A 125 V) shall provide four grounding-type (wire ground) outlets at intervals of 6 inches. It shall be one of the following, or equal: National Electric RCF2GW-603-6 series equipment as shown on Fig. 14 (Porter Electrical Division, Porter Building, Pittsburgh, Pa.), or Plugmold Kit for Racks, Drawing ED-30751-1 (The Wiremold Co., Hartford, Conn. 06110).

3.8.14.5 Plug-in strip (Type III, IV).- The plug-in strip (rated 15 A 125 V) shall provide eleven grounding-type (wire ground) outlets at intervals of 6 inches. It shall be one of the following, or equal: National Electric RCF2GW-606-6 series equipment as shown on Fig. 14 (Porter Electrical Division, Porter Building, Pittsburgh, Pa.), or Plugmold Kit for Racks, Drawing ED-31723 (The Wiremold Co., Hartford, Conn. 06110).

3.8.14.6 Circuit breaker equipment.- The plug-in strip shall terminate in circuit breaker equipment (as shown in fig. 7) consisting of a single pole 20 A 120 V manual-reset circuit breaker, solid neutral (ungrounded), mounted

in a surface mounting box with interior terminating block and cover, of one of the following types, or equal: Cutler-Hammer CH-120 Safety Breaker and CH2-S Load Center; or Square D QO-120 Circuit Breaker and QO-2S Surface Mounting Box, Interior, and Cover.

3.8.14.7 Wiring.- The leads from the plug-in strip shall be connected as follows:

(a) Black lead: To circuit breaker terminal (switched). This lead shall be long enough to permit the circuit breaker to be pulled out of the box for convenient access to the terminal screw; if necessary for this purpose, a piece of 600 volt type TW wire shall be solder-spliced to the plug-in strip lead; the joint shall be covered with a wire nut.

(b) White lead: To neutral bar on interior terminating block. Must be ungrounded.

(c) Green lead: To a screw through the bottom of the surface mounting box, tapped into the accessory mounting bracket of the rack. The lead shall be terminated in a soldering lug secured between two flat washers under the screw head (with lockwasher).

3.8.15 Optional blower installation

3.8.15.1 Blower installation.- When called out as a required option (see 3.2.2) for a specific rack Type, a blower installation shall be provided in accordance with the following group of subparagraphs (3.8.15 series).

3.8.15.2 Vent plate.- When a blower installation is furnished, only one vent plate (fig. 8) shall be provided. It shall be installed back of the upper opening in the door. Also see 3.8.15.8.

3.8.15.3 Design.- The blower shall be designed to draw air into the rack through an intake filter, via the lower vent opening in the rear door. No portion of the blower or filter shall project outside the rack door.

3.8.15.4 Assembly of blower.- The blower and the other items listed hereunder shall be assembled in the rack using hardware items 32 to 39, Table I.

3.8.15.5 Blower motor.- The blower motor shall be in accordance with Federal Specification CC-M-636 as detailed in items (a) through (k) below, but in addition shall meet the requirements of (m) through (r) below, which shall take precedence over any lesser requirements (or absence of requirements) in CC-M-636.

(a) Type (CC-M-636): I (single-phase, squirrel cage)
(b) Class (CC-M-636): 3 (shaded pole)
(c) Style (CC-M-636): B1 or B2 (totally enclosed)
(d) Duty (CC-M-636): Continuous
(e) Ambient temperature of reference (CC-M-636): 50°C
(f) Synchronous speed (CC-M-636): 1800 rpm
(g) Power rating (CC-M-636): 15 millihorsepower
(h) Voltage rating (CC-M-636): 115 V (also see (r))
(k) Frequency rating (CC-M-636): 60 Hz (also see (r))

(m) Mounting: Horizontal
(n) Direction of rotation: See 3.8.15.3
(p) Electrical design: Line starting (see (r)); no commutator, slip rings or brushes; no centrifugal cutouts, starting relays or other make-break contacts actuated during starting, running, or stopping (see 3.8.15.19 for locked rotor requirements)
(q) Exterior finish: All exterior metal surfaces to be finished (plated, enameled, lacquered, or equivalent)
(r) Voltage/frequency source and ambient temperature for starting and continuous operation without damage or overheating, installed in cabinet racks with fan blades attached: 102 V to 138 V at 57 to 63 Hz (all values and combinations in the ranges); -10°C to +50°C

3.8.15.6 Blower fan.- The blower fan shall be of the propeller type, 4 bladed, 10-inch diameter, and shall be mounted directly on the motor shaft. Also see 3.8.15.3, 3.8.15.5(n).

3.8.15.7 Filter.- The filter shall be a 10 by 10 inch (9 by 9 inch opening) by 1 inch thick impregnated glass-wool type.

3.8.15.8 Blower mounting plate.- The blower mounting plate shall be identical to the vent plate (fig. 8), except that a 9 by 9 inch square cutout shall be substituted for the 3/8 inch square perforations. See fig. 20.

3.8.15.9 Blower housing.- The blower housing shall be a 16 gauge steel shell in which the blower is mounted (see fig. 20). The housing shall have a slide space to receive the filter and permit convenient insertion and removal thereof without the necessity of removing screws or other fasteners. The blower housing shall be arranged to mount on the blower mounting plate (3.8.15.8) using some or all of the holes therein which match those in the door.

3.8.15.10 Motor support structure.- The blower motor shall be supported horizontally in the blower housing. With the motor in place, the motor support structure within the blower housing shall not present a projected obstructional area at right angles to the air stream of more than 4 square inches in excess of the projected obstructional area presented by the motor alone.

3.8.15.11 Resilient motor mounting.- Rubber mountings shall be interposed between the motor frame and the supporting structure in the blower housing to minimize transmission of vibration. The rubber mountings shall be capable of sustaining the shocks which occur in shipping the racks without tearing out. Natural rubber shall not be used.

3.8.15.12 Blower baffle plate.- A blower baffle plate shall be an integral part of the blower housing. The baffle plate shall be vertical, of 16 gauge steel, with a hole having a 5-1/4 inch radius from the axis of the motor shaft. Front-to-back, the baffle plate shall be located at the center of the blower fan so that the propeller blades project equally on each side of the baffle plate.

3.8.15.13 Blower cover plate.- The fan-end of the blower housing shall be provided with a 11-1/4 by 11-1/4 inch flanged cover plate secured with four machine screws which engage tapped holes in the blower housing. The cover plate shall have a 10 inch diameter hole, backed up with 1/2 inch hardware cloth, or equivalent wire mesh having a wire size and a ratio of unobstructed area to total area not less than that of hardware cloth (see fig. 20). The cloth or mesh shall be permanently attached to the blower cover plate, on

the side facing into the blower housing and secured by enveloping or folding the four flanges of the cover plate over (180°) onto the hardware cloth or mesh.

3.8.15.14 Power receptacle.- A grounding-type three-pole male recessed receptacle shall be provided and mounted on the left side of the blower housing. The receptacle shall be industry No. 7486G, midget flush base, 3-wire polarized, grounded, twist-lock type, 15 A 125 V. The mating connector shall be provided to fit the recessed receptacle, industry No. 7484 midget 3-wire twist-lock connector, cord grip, 15 A 125 V.

3.8.15.15 Blower Switch.- A double-pole single-throw toggle switch shall be provided and installed on the upper side of the blower housing for use in turning the blower on and off. The switch shall be provided with an on-off plate.

3.8.15.16 Blower wiring.- The two current leads from the motor shall be connected to the toggle switch terminals. An additional pair of wires shall be run from the switch to the current terminals of the power receptacle. In addition, a third wire lead shall be run, from a screw tapped into (or bolted to) the motor case, to a mounting screw on the power receptacle. All leads shall be soldered to the respective terminal lugs, and shall be clamped, laced, or taped to the structure so as to avoid interference with the fan blades and destructive flexing due to vibration and air turbulence. Refer to fig. 27 (page 29) for wiring details.

3.8.15.17 Blower mounting.- The blower assembly shall be mounted in the lower vent opening in the rear door of the rack, in lieu of the lower vent plate, and shall project entirely inside the rack cabinet.

3.8.15.18 Blower power cord.- The blower power cord shall consist of the cable-half of the twist-lock connector attached to a length of three-conductor #18 type SJ rubber covered cord. A 1/2 inch (conduit size) threaded porcelain bushing, with conduit nut, shall be provided in the rear convenience outlet receptacle box. The blower cord shall be fed through the porcelain bushing into the rear convenience receptacle box and shall be connected to line and ground terminals of the receptacle (fig. 27). The cord shall be clamped to the rack (but not to the door) in a position which will allow it to flex freely when the door is fully opened and closed. The rack door shall be free for removal merely by lifting it to separate the hinges when the twist-lock receptacle is disengaged. There shall be no connection from ground (rack frame) to the line terminals of the blower circuit (twist-lock receptacle engaged). There shall be a metallic circuit from the motor case to the rack frame (independent of contact through door hinges).

3.8.15.19 Locked rotor protection.- The motor shall not be damaged with the rotor continuously locked under worst-case conditions of 3.8.15.5 (r). Protective means shall be incorporated as necessary to meet this requirement (capability to sustain locked rotor without damage; thermal cutout; fuse; circuit breaker: or equivalent).

4. QUALITY ASSURANCE PROVISIONS

4.1 General inspection provisions.- Unless otherwise specified in the contract, all tests and inspection to determine compliance with the electrical and mechanical requirements of the contract specifications shall be made by the contractor and shall be subject to Government inspection. The term "Government inspection" as used in this specification means that an FAA representative will witness the contractor's testing and inspection, and will carry out such visual and other inspection as deemed necessary to assure compliance with contract requirements. The Government reserves the

right to waive Government inspection at the contractor's plant. If Government inspection is waived, the contractor shall furnish certified inspection records describing the readings or results obtained during the inspection and tests required for the applicable contract specifications. The data must demonstrate that the equipment meets contract requirements, include the statement "This certifies that this unit fully meets all technical requirements of the contract", and be dated and signed by a responsible official of the contractor. Shipment shall not be made until the contractor receives written Government approval of the equipment inspected, or of the certified inspection records.

4.2 Notification of readiness for inspection.- When the contractor has one or more production equipments completed, i.e. equipments produced to meet all contract requirements, he shall notify the Government Contracting Officer in writing that he is ready for Government inspection. Such notification shall be given in time to reach the Government Contracting Officer not less than five work days before the contractor desires inspection to start.

4.3 Furnishing of test equipment.- The contractor shall supply all the jigs, test fixtures, gauges, and other test and measuring equipment necessary to carry out the tests and inspections required under this specification.

4.4 One-time type inspection.- A type inspection shall be conducted on one equipment out of a contract lot in accordance with the following subparagraphs. In the event of non-compliance in any respect, the Government may request inspection of more than one equipment and the contractor shall so comply.

4.4.1 Panel mounting holes.- At least 15% of the panel mounting holes on one equipment shall be inspected as specified in the following subparagraphs.

4.4.1.1 Distance between holes.- The distance between panel mounting holes shall be measured for compliance with the non-cumulative tolerance applying (figs. 1 and 25) from each hole to each adjacent hole and each other hole.

4.4.1.2 Tapped screw holes.- The panel mounting holes shall be gauged for compliance with 3.8.5.3.

4.4.1.3 Perpendicularity to mounting surface (3.8.5.4).- In the event these holes have been drilled and tapped on a drill press, boring machine or similar machine, measurement of the angle need not be made. A visual check will be acceptable. If drilled by other means, actual measurement of perpendicularity shall be made. In either case, the Government inspector shall select at random at least 15% of the holes in each panel-mounting element for checking.

4.4.2 Dimensions.- All dimensions in this specification (in addition to those specified in 4.4.1) shall be inspected for compliance.

4.4.3 Locked rotor test.- The blower motor rotor shall be locked under the worst-case conditions of 3.8.15.5(r) for a sufficient period to actuate any protective device, or if none is provided, for a period of 4 hours. Any evidence of motor damage shall be cause for rejection under the requirements of 3.8.15.19.

4.5 Ten percent type inspection.- Ten percent of the equipment shall be submitted to the inspections given in the following subparagraphs.

4.5.1 Rack trueness.- The rack shall be bolted to a plane horizontal surface and a perpendicularity and trueness check shall be made (3.8.5.2).

4.5.2 Trim removal and replacement.- The equipment shall be inspected to insure snug fit of the trim and easy removal and replacement as well as the interchangeability of trim from rack to rack.

4.5.3 Panel mounting holes.- The perpendicularity of the panel mounting holes with respect to the mounting surfaces shall be observed visually for compliance with paragraph 3.8.5.4 according to the method of manufacture, as specified in 4.4.1.3.

4.5.4 Door removal and replacement.- The rack doors shall be checked for ease of removal and replacement by one person.

4.5.5 Door hinges.- Door hinges shall be inspected for compliance with 3.8.9.5.3, 3.8.9.5.4, 3.8.9.5.5.

4.5.6 Side forming and assembly.- The side forming and assembly to the panel mounting angles shall be inspected to insure that the distance from the front face of the angle to the end of the second bend does not exceed 1-7/16", as specified in fig. 11, so as to insure adequate overlap of corner trim.

4.6 Production inspection.- All equipments shall be subjected to the inspections in the following subparagraphs.

4.6.1 Door fit.- The door shall be inspected to determine ease and smoothness of operation and degree of fit with respect to the rack frame.

4.6.2 Door catch.- The operation of the door catch shall be inspected to insure easy and positive locking, absence of rattle, ease of turning the handle and similar general features.

4.6.3 Welds inspection.- The general appearance, number, and location of welds shall be observed for similarity with test specimen.

4.6.4 Finish.- The finish shall be inspected for compliance with 3.8.2 and subparagraphs thereunder. The coating shall have an even and pleasing appearance. Evidence of rust or primer coat showing through the finish shall be cause for rejection.

4.6.5 Accessory wiring.- Wiring of plug-in strip and blower (when provided), and convenience outlets, shall be observed for conformance with 3.8.10.7, 3.8.14.7, 3.8.15.16, 3.8.15.18, and for workmanship, including the terminal connections. Both grounding contacts on each convenience outlet and the grounding contact on each outlet on the plug-in strip, and the blower motor case, shall be individually checked for low-resistance continuity to the steel frame of the rack, using a test device that will give a positive indication if the circuit resistance exceeds 0.5 ohm.

4.6.6 Grounding test.- Tests shall be made as follows: The rack shall be insulated from ground by means of wood strips. A 10-watt test lamp shall be used, powered from the 115 volt line, and provided with two insulated test prods. One prod shall be touched to the rack frame (for example, to the head of an unpainted screw which is tapped into the rack), while the other prod is touched to each side of the convenience outlet circuit (blower plugged-in and blower switch on), and to each side of the plug-in strip circuit. Any visible glow in the lamp shall be cause for rejection of the wiring affected.

4.6.7 Squareness (panel mounting surfaces).- Tests shall be made to determine compliance with paragraph 3.8.5.5.

5. PREPARATION FOR DELIVERY

5.1 Packing of racks.- Each rack and its associated hardware (3.3.3, 3.4.3, 3.5.3, 3.6.3, 3.7.2) shall be packed together in a single wooden box or crate in such a manner as to prevent shifting within the box during shipment. Each shipping container shall be steel banded. Blower motors (when blower installations are furnished) shall be adequately braced using soft wadded packing material or similar means to prevent damage to the supports, shock mounts, and fan blades during transit.

5.1.1 Domestic shipment.- Except where export shipping is required by the contract, each rack shall be prepared for boxing by a layer of kraft paper (60# minimum weight) on top of which shall be placed a layer of corrugated paper (35# minimum weight); both of these layers shall cover the entire rack. A second layer of similar corrugated paper shall be applied at all points of contact between first such layer and the shipping container.

5.1.2 Export shipment.- Where export shipping is required by the contract, each rack shall be prepared for export shipment in a manner identical to that specified in 5.1 except that a layer of waterproof paper shall be placed on top of the layers specified in 5.1.1 and the container shall be a tight wooden box with two wooden skids, measuring not less than 1-1/2" x 3" in cross section, attached to the bottom.

5.2 Marking.- Each shipping container shall be marked to allow identification for storage purposes without the necessity of unpacking. The following (as a minimum) are required: Title and type designation, as shown on nameplate, plus the following:

Options (such as: WITH PLUG-IN STRIP AND BLOWER).

Contract and/or purchase order number/s.

Contractor's name.

5.3 Unpacking instructions.- In case special unpacking procedure must be followed in order to prevent damage to items in shipping containers, concise unpacking instructions shall be attached to the outside of each shipping case in a manner which will prevent damage or loss of legibility while

the equipment is in transit. The instructions shall be captioned UNPACKING INSTRUCTIONS, and the caption shall be located so as to be easily seen by personnel preparing to unpack the rack.

6. NOTES

6.1 Intended use.- The racks specified herein are intended for supporting and enclosing small units of radio and communication equipment, such as are assembled on standard 19" relay rack panels. The total combined weight of such pieces of equipment may be as much as 600 pounds per rack. Racks may be used singly or bolted together, side by side in groups.

6.2 Note on information items.- The contents of the subparagraph below are only for the information of the Contracting Officer. They are not contract requirements, nor binding on either the Government or the contractor, except to the extent that they may be specified elsewhere in the contract as such. Any reliance placed by the contractor on the information in this subparagraph is wholly at the contractor's own risk.

6.2.1 Ordering information.- Requests for proposals, invitations to bid, contracts, orders, also detail specifications which make this specification applicable, should state the type of rack required by classification term "Type" (see 1.2), and the options, if any are required, by name with reference to the corresponding paragraph hereof (3.3.2, 3.4.2, 3.5.2, 3.6.2).

* * * * *

For Table I, see pages 25-28.

For Figure 1, see page 29.

ATTACH FOLLOWING PAGE 29: Drawings D-5731-1
D-5731-2
D-5731-3
D-5731-4
D-5731-5
B-21216H

TABLE I MOUNTING HARDWARE

ITEM	FASTENER	QUANTITY PER TYPE OF RACK					MOUNTING OR OTHER USE	TYPE	SIZE	MATERIAL*	FINISH*
		I	II	III	IV	V					
1	Machine screw	100	50	100	100	100	Panel	Truss head; head dia. 0.425-0.468"	10-32 x 1/2"	Brass	Dull black nickel
2	Machine screw	8	8	8	-	-	Trim clip	Pan head or round head	1/4"-20 x 3/8"	Brass	Dull black nickel
3	Machine screw	2	3	2	-	-	Trim knob	Unspecified	8-32 Min.	Brass	NCTC
4	Lockwasher	2	3	2	-	-	Trim knob	Unspecified	To fit	Phosphor bronze	NCTC
5	Machine screw**	32	32	32	64	-	Vent & blower plates	Pan head or binder head	8-32 x 3/8"	Brass	BNC
6	Machine screw nut**	32	32	32	64	-	Vent & blower plates	Hexagon	8-32	Brass	NCTC
7	Lockwasher**	32	32	32	64	-	Vent & blower plates	Internal tooth	#8	Phosphor bronze	NCTC
8	Machine screw	16	-	16	16	-	Top closing plate	Pan head or binder head	8-32 x 3/8"	Brass	BNC
9	Machine screw nut	16	-	16	16	-	Top closing plate	Hexagon	8-32	Brass	NCTC
10	Lockwasher	16	-	16	16	-	Top closing plate	Internal tooth	#8	Phosphor bronze	NCTC
11	Cap or machine screw	8	6	8	8	4	Rack tie bolt	Hexagon head	1/4"-20 x 1"	Steel	ZCC
12	Machine screw nut	8	6	8	8	4	For tie bolt	Hexagon	1/4"-20	Steel	ZCC

TABLE I MOUNTING HARDWARE—Continued

ITEM	FASTENER	QUANTITY PER TYPE OF RACK					MOUNTING OR OTHER USE	TYPE	SIZE	MATERIAL*	FINISH*
		I	II	III	IV	V					
13	Lockwasher	8	6	8	8	4	For tie bolt	Spring (split)	1/4"	Steel	ZCC
14	Machine screw	2	2	2	2	-	Rear conv. box	Pan head or binder head	To fit	Brass	BNC
15	Lockwasher	2	2	2	2	-	Rear conv. box	Unspecified	To fit	Phosphor bronze	NCTC
16	Machine screw	1	1	1	1	-	Rear conv. cover	Oval head or flat head	6-32	Unspecified	BNC
17	Machine screw	2	2	2	2	-	Rear conv. outlet	Unspecified	To fit	Brass	ALL NCTC
18	Machine screw nut	2	2	2	2	-	Rear conv. outlet	Hexagon	To fit	Brass	
19	Lockwasher	2	2	2	2	-	Rear conv. outlet	Unspecified	To fit	Phosphor bronze	
20	Machine screw	2	2	2	2	2	Front conv. box	Unspecified	To fit	Brass	
21	Lockwasher	2	2	2	2	2	Front conv. box	Unspecified	To fit	Phosphor bronze	
22	Machine screw	1	1	1	1	1	Front conv. cover	Oval head or flat head	6-32	Unspecified	BNC
23	Machine screw	1	1	1	1	-	Armored cable clamp	Unspecified	Unspecified	Brass	ALL NCTC
24	Lockwasher	1	1	1	1	-	Armored cable clamp	Unspecified	To fit	Phosphor bronze	
25	Machine screw	As required				-	Plug-in strip	Pan head or round head	Unspecified	Brass	

TABLE I MOUNTING HARDWARE—Continued

ITEM	FASTENER	QUANTITY PER TYPE OF RACK					MOUNTING OR OTHER USE	TYPE	SIZE	MATERIAL*	FINISH*
		I	II	III	IV	V					
26	Lockwasher	As required				-	Plug-in strip	Unspecified	Unspecified	Phosphor bronze	ALL NCTC
27	Machine screw	As required				-	Ckt. Brkr. housing	Pan head or round head	Unspecified	Brass	
28	Lockwasher	As required				-	Ckt. Brkr. housing	Unspecified	Unspecified	Phosphor bronze	
32	Machine screw	4	4	4	4	-	Blower cover plate	Pan head or round head	6-32 x 1/4"	Brass	
33	Lockwasher	4	4	4	4	-	Blower cover plate	Unspecified	#6	Phosphor bronze	
34	Machine screw	2	2	2	2	-	Blower receptacle	Pan head or round head	6-32 x 1/4"	Brass	
35	Lockwasher	2	2	2	2	-	Blower receptacle	Unspecified	#6	Phosphor bronze	
36	Machine screw	As required				-	Blower motor	Pan head or round head	Unspecified	Brass	
37	Lockwasher	As required				-	Blower motor	Unspecified	Unspecified	Phosphor bronze	
38	Machine screw		1	1	1	-	Blower cable clamp	Unspecified	Unspecified	Brass	

TABLE I MOUNTING HARDWARE—Concluded

ITEM	FASTENER	QUANTITY PER TYPE OF RACK					MOUNTING OR OTHER USE	TYPE	SIZE	MATERIAL*	FINISH*
		I	II	III	IV	V					
39	Lockwasher	1	1	1	1	-	Blower cable clamp	Unspecified	To fit	Phosphor bronze	NCTC
40	Machine screw	12	6	12	12	-	Side closing plate	Flat head	8-32 x 3/8"	Brass	BNC
41	Machine screw nut	12	6	12	12	-	Side closing plate	Hexagon	8-32	Brass	NCTC
42	Lockwasher	12	6	12	12	-	Side closing plate	Internal tooth	#8	Phosphor bronze	NCTC
43	Machine screw	6	3	6	6	-	Rear closing plate	Pan head or binder head	8-32 x 3/8"	Brass	BNC
44	Machine screw nut	6	3	6	6	-	Rear closing plate	Hexagon	8-32	Brass	NCTC
45	Lockwasher	6	3	6	6	-	Rear closing plate	Internal tooth	#8	Phosphor bronze	NCTC

NOTES: *Stainless steel (less plating) may be substituted for all except Items 1 and 2.
**Quantity correct for vent plates, or vent plate and optional blower installation.

NCTC: White or bright nickel, chromium, tin, or cadmium
BNC: Bright nickel or chromium
ZCC: Zinc; white or bright chromium over nickel & copper; white or bright cadmium

ITEMS 25 TO 45 ARE FOR OPTIONAL EQUIPMENT

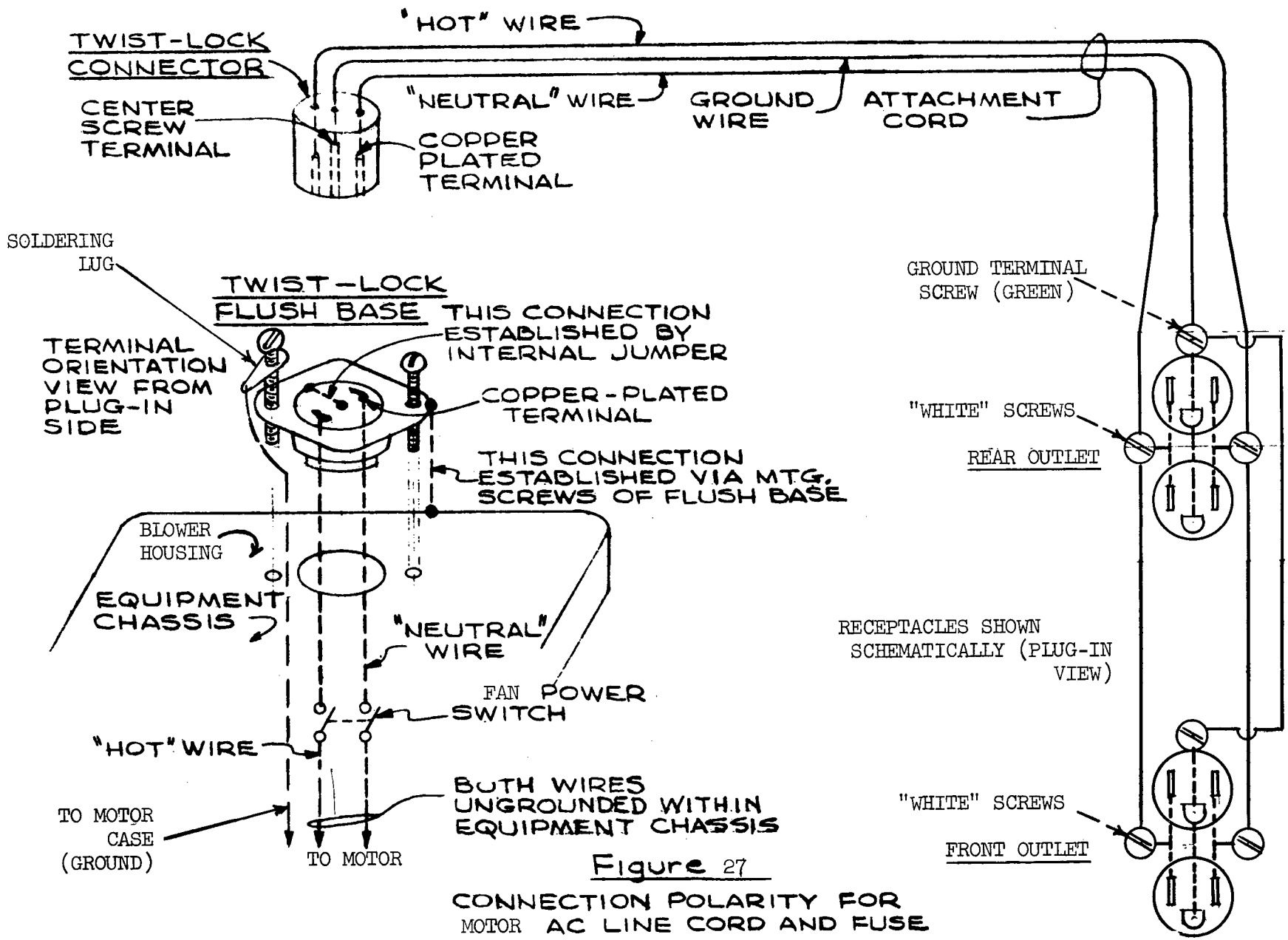
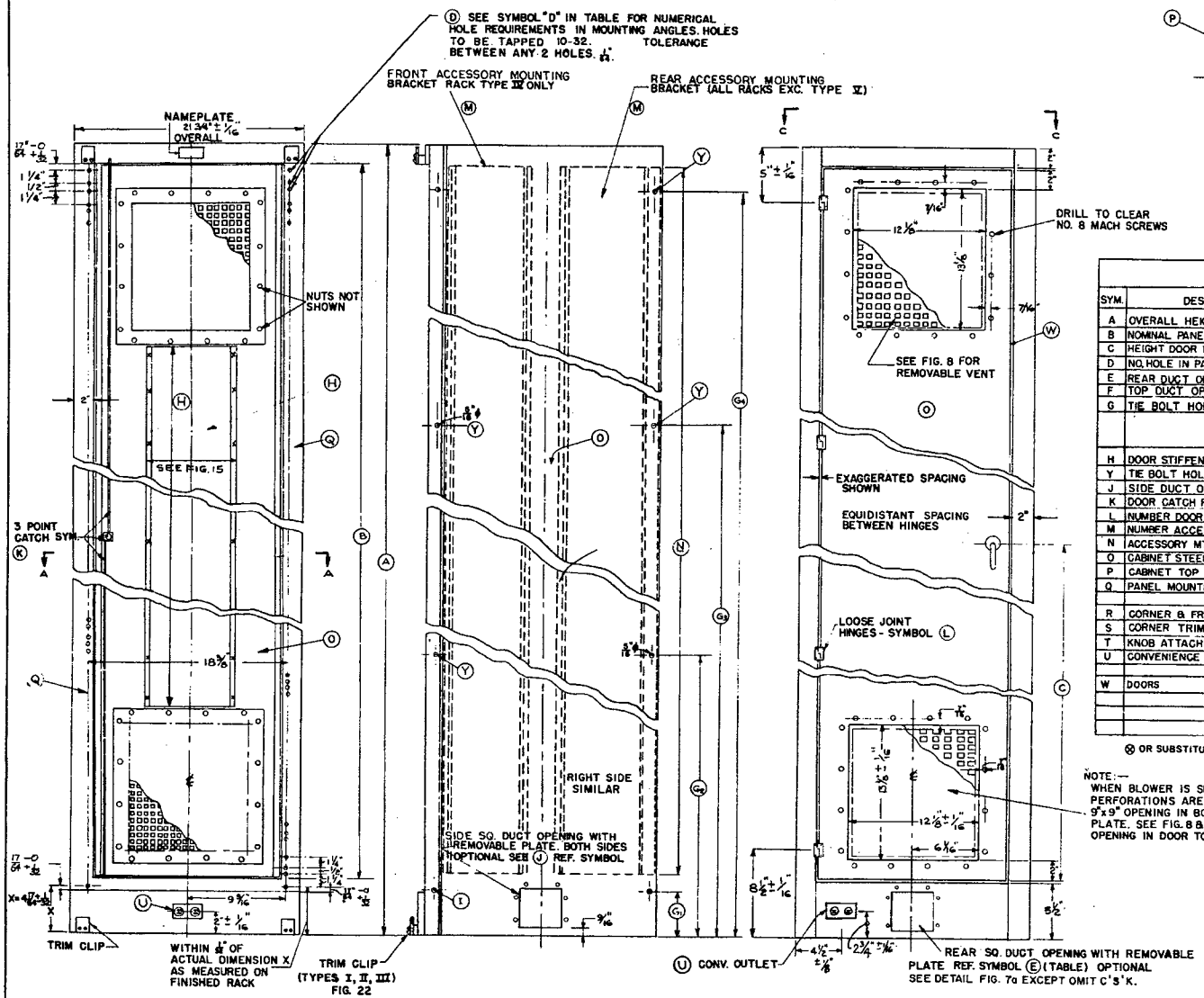


Figure 27

CONNECTION POLARITY FOR MOTOR AC LINE CORD AND FUSE



FRONT ELEVATION

FIG. 1.

FIG. 1-2 FOR TYPES I, II, III AND PARTIALLY FOR TYPE IV. SEE FIGS. 3, 5, 6.

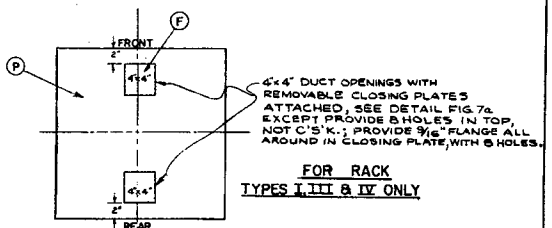
SIDE ELEVATION

FIG. 2.

REAR ELEVATION

FIG. 3

TYPES I, II, III, IV



FOR RACK TYPES I, III & IV ONLY

TOP VIEW C-C

FIG 4

TABLE III

SYM.	DESCRIPTION	REF. DWG. 5731 SERIES	TYPE I	TYPE II	TYPE III	TYPE IV
A	OVERALL HEIGHT TOL. ± 1/16"	FIG. 1, SH. 1	76 9/32"	42 9/32"	83 1/32"	83 1/32"
B	NOMINAL PANEL SPACE (NOT CONTROLLED)	FIG. 1, SH. 1	70"	36 1/2"	77"	77"
C	HEIGHT DOOR HANDLE ± 1/16"	FIG. 3, SH. 1	34 1/8"	17 1/8"	37 11/16"	37 11/16"
D	NO. HOLE IN PANEL MOUNT	FIG. 1, SH. 1	80	42	88	88
E	REAR DUCT OPENING (OPTION)	FIG. 3, SH. 1	4" x 4"	2 1/2" x 2 1/2"	4" x 4"	4" x 4"
F	TOP DUCT OPENING	FIG. 4, SH. 1	2-4"x4"	NONE	2-4"x4"	2-4" x 4"
G	TIE BOLT HOLE LOCATIONS	FIG. 2, SH. 1	G1 4 1/2" G2 27" G3 49" G4 71 1/2"	G1 4 1/2" G2 21 1/2" G3 38 1/2" G4 OMIT	G1 4 1/2" G2 29 1/2" G3 53 1/2" G4 78 1/2"	G1 4 1/2" G2 29 1/2" G3 53 1/2" G4 78 1/2"
H	DOOR STIFFENER HT. +0 -1/8"	FIG. 1, 15 SH. 1, 4	36"	OMIT	43"	43"
Y	TIE BOLT HOLES-NUMBER REQ'D.	FIG. 2, 7 SH. 1 2	8	6	8	8
J	SIDE DUCT OPENING (OPTION)	FIG. 2, 7 SH. 1, 2	4"x 4"	2 1/2 x 2 1/2"	4"x 4"	4"x 4"
K	DOOR CATCH RODS	FIG. 1 SH. 1	REQUIRED	OMIT	REQUIRED	REQUIRED
L	NUMBER DOOR HINGES	FIG. 3 SH. 1	4	3	4	4
M	NUMBER ACCESSORY MTG. BRKT.	FIG. 5, 6 SH. 2	2 (REAR)	2 (REAR)	2 (REAR)	4
N	ACCESSORY MTG. BRACKET DIM. +0 -1/8"	FIG. 2 SH. 1 FIG. 9, 10 SH. 3	67 3/4"	34 1/2"	74 3/4"	74 3/4"
O	CABINET STEEL THICKNESS	FIG. 1, 2, 3 SH. 1	16 GA.	16 GA.	16 GA.	16 GA.
P	CABINET TOP & BOTTOM THICKNESS	FIG. 13, A, B & C SH. 3	13 GA.	13 GA.	13 GA.	13 GA.
Q	PANEL MOUNTING ELEMENT I, II, III	FIG. 1 SH. 1 FIG. 11 SH. 3	2"x1 1/2" x 3/16" ANGLE	2"x1 1/2" x 3/16" ANGLE	2 1/2"x 1 1/2" x 3/16" ANGLE	2 1/2" x 2 1/2" x 3/16" CHANNEL ⊗
	IV	FIG. 6 SH. 2				
R	CORNER & FRONT TRIM LENGTH	FIG. 18, 19 SH. 4	75 11/16"	42 11/16"	82 13/16"	OMIT
S	CORNER TRIM STRAP DIM.	FIG. 18 SH. 4	38 3/16"	22 3/16"	42 13/16"	OMIT
T	KNOB ATTACHMENT LOCATION	FIG. 18, 19 SH. 4	37 11/16"	21 11/16"	41 13/16"	OMIT
U	CONVENIENCE OUTLETS	FIG. 13 SH. 1	✓	✓	✓	✓
W	DOORS	FIG. 5 SH. 1 FIG. 5, 6 SH. 2	(REAR)	(REAR)	(REAR)	F & R

⊗ OR SUBSTITUTE PAIRS OF ANGLES – SEE FIG. 6

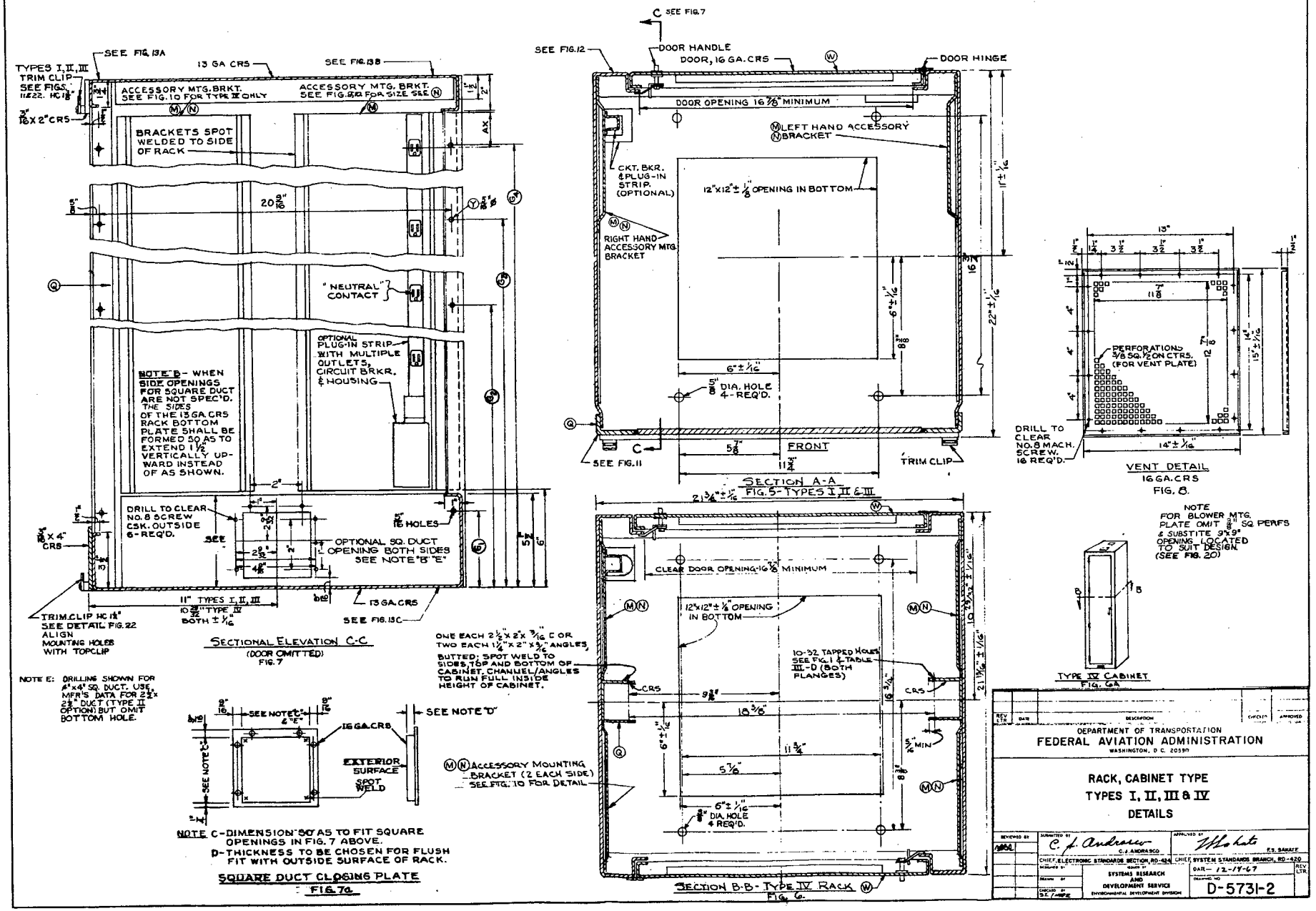
NOTE:—
WHEN BLOWER IS SPECIFIED PERFORATIONS ARE DELETED & SUBSTITUTE 9"x 9" OPENING IN BOTTOM (BLOWER MOUNTING) PLATE. SEE FIG. 8 & 20 12 1/4" x 13 3/4" OPENING IN DOOR TO BE RETAINED.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

RACK, CABINET TYPE
TYPES I, II, III & IV
ELEVATIONS

REVIEWED BY	SUBMITTED BY	APPROVED BY
986L	C. J. Andrasco	F.S. Sakate
	C.J. ANDRASCO CHIEF, ELECTRONIC STANDARDS SECTION, RD-424	F.S. SAKATE CHIEF, SYSTEM STANDARDS BRANCH, RD-420
DESIGNED BY	DRAWN BY: SYSTEMS RESEARCH AND DEVELOPMENT SERVICE ENVIRONMENTAL DEVELOPMENT DIVISION	DATE 12-14-67
TRACED BY		DRAWING NO. D-5731-1
CHECKED BY		

440 605 S&E
110-605-55E


SEE FIG. 13A
TYPES I, II, III
TRIM CLIP
SEE FIGS. 11 & 22. HC 18
13 GA CRS
SEE FIG. 13B
ACCESSORY MTG. BRKT.
SEE FIG. 10 FOR TYPE IV ONLY
ACCESSORY MTG. BRKT.
SEE FIG. 9 FOR SIZE SEE N
BRACKETS SPOT WELDED TO SIDE OF RACK
20 9/16"
"NEUTRAL" CONTACT
OPTIONAL PLUG-IN STRIP WITH MULTIPLE OUTLETS, CIRCUIT BRKR. & HOUSING
NOTE B- WHEN SIDE OPENINGS FOR SQUARE DUCT ARE NOT SPEC'D. THE SIDES OF THE 13 GA. CRS RACK BOTTOM PLATE SHALL BE FORMED SO AS TO EXTEND 1 1/2" VERTICALLY UPWARD INSTEAD OF AS SHOWN.
DRILL TO CLEAR NO. 8 SCREW CSK. OUTSIDE 6-REQ'D.
OPTIONAL SQ. DUCT OPENING BOTH SIDES SEE NOTE "B" "E"
5" 16 HOLES
11" TYPES I, II, III
10 29/32" TYPE IV
BOTH ± 1/16"
13 GA. CRS
SEE FIG. 13C
TRIM CLIP HC 18"
SEE DETAIL FIG. 22
ALIGN MOUNTING HOLES WITH TOPCLIP
SECTIONAL ELEVATION C-C
(DOOR OMITTED)
FIG. 7
NOTE E: DRILLING SHOWN FOR 4" x 4" SQ. DUCT. USE MFR'S DATA FOR 2 1/2" x 2 3/8" DUCT (TYPE II OPTION) BUT OMIT BOTTOM HOLE.
ONE EACH 2 1/2" x 2" x 3/16" C OR TWO EACH 1 1/4" x 2" x 3/16" ANGLES, BUTTED; SPOT WELD TO SIDES, TOP AND BOTTOM OF CABINET. CHANNEL/ANGLES TO RUN FULL INSIDE HEIGHT OF CABINET.
SEE NOTE "E"
SEE NOTE "D"
15 GA. CRS
EXTERIOR SURFACE SPOT WELD
NOTE C - DIMENSION SO AS TO FIT SQUARE OPENINGS IN FIG. 7 ABOVE.
D - THICKNESS TO BE CHOSEN FOR FLUSH FIT WITH OUTSIDE SURFACE OF RACK.
SQUARE DUCT CLOSING PLATE
FIG. 7a
SEE FIG. 12
C SEE FIG. 7
DOOR HANDLE
DOOR, 16 GA. CRS
DOOR HINGE
DOOR OPENING 16 7/8" MINIMUM
LEFT HAND ACCESSORY BRACKET
CKT. BKR. & PLUG-IN STRIP. (OPTIONAL)
12" x 12" ± 1/8" OPENING IN BOTTOM
RIGHT HAND ACCESSORY MTG. BRACKET
6" ± 1/16"
5/8" DIA. HOLE 4-REQ'D.
SEE FIG. 11
FRONT
TRIM CLIP
SECTION A-A
FIG. 5-TYPES I, II & III
CLEAR DOOR OPENING-16 7/8" MINIMUM
12" x 12" ± 1/8" OPENING IN BOTTOM
10-32 TAPPED HOLES SEE FIG. 1 & TABLE III-D (BOTH FLANGES)
CRS
9 1/8"
18 3/16"
11 3/4"
5 7/16"
6" ± 1/16"
5/8" DIA. HOLE 4 REQ'D.
5" MIN
ACCESSORY MOUNTING BRACKET (2 EACH SIDE) SEE FIG. 10 FOR DETAIL
SECTION B-B- TYPE IV RACK
FIG. 6.
PERFORATIONS 3/8 SQ. 1/2 ON CTRS. (FOR VENT PLATE)
DRILL TO CLEAR NO. 8 MACH. SCREW. 16 REQ'D.
VENT DETAIL
16 GA. CRS
FIG. 8.
NOTE
FOR BLOWER MTG. PLATE OMIT 3/8" SQ PERFS & SUBSTITUTE 9" x 9" OPENING LOCATED TO SUIT DESIGN. (SEE FIG. 20)
TYPE IV CABINET
FIG. 6A
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590
RACK, CABINET TYPE
TYPES I, II, III & IV
DETAILS
C. J. ANDRAKA
CHIEF, ELECTRONIC STANDARDS SECTION, RD-424
F.S. SAKATA
CHIEF, SYSTEM STANDARDS BRANCH, RD-420
SYSTEMS RESEARCH AND DEVELOPMENT SERVICE
ENVIRONMENTAL DEVELOPMENT DIVISION
DATE- 12-19-67
D-5731-2

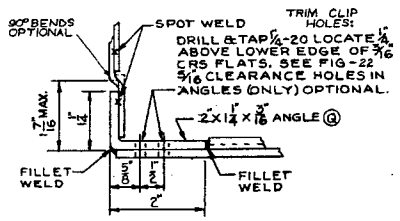


FIG. 11

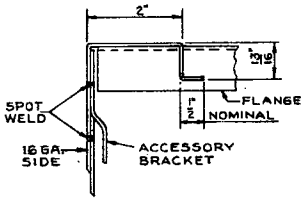
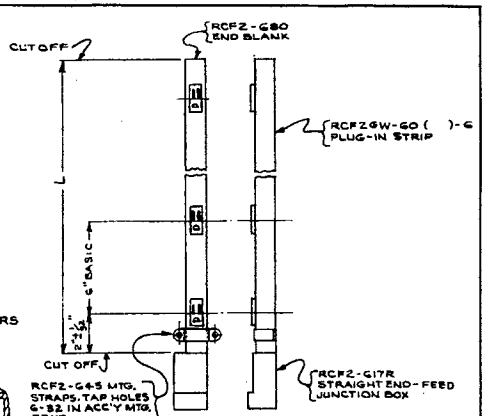
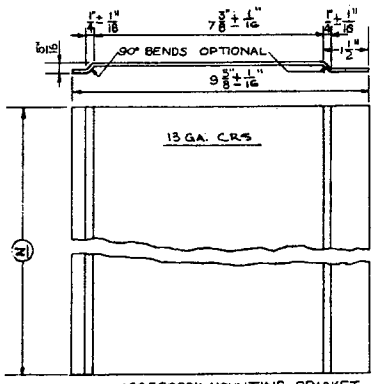


FIG. 12.

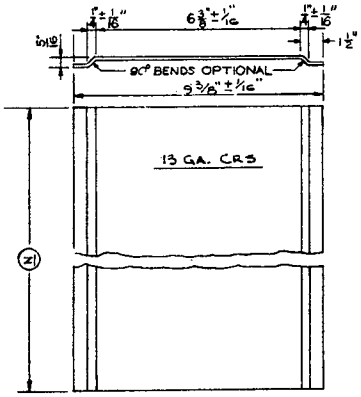
NOTE "A" FILL ALL OPENINGS IN TOP OF RACK BY WELDING LIGHTLY FROM INSIDE.



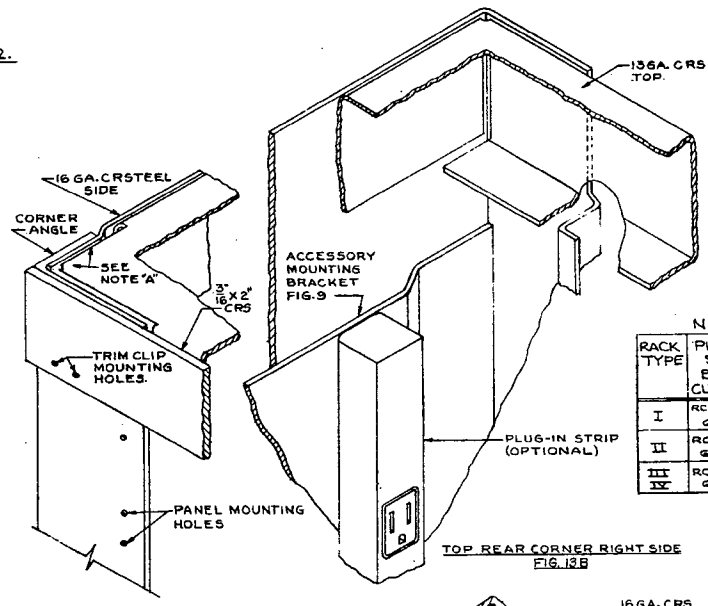
CUTTING & ASSEMBLY



ACCESSORY MOUNTING BRACKET
FIG. 9
TYPE I, II & III RACK
RIGHT-HAND BRACKET AS SHOWN
LEFT-HAND SIMILAR AND OPPOSITE.

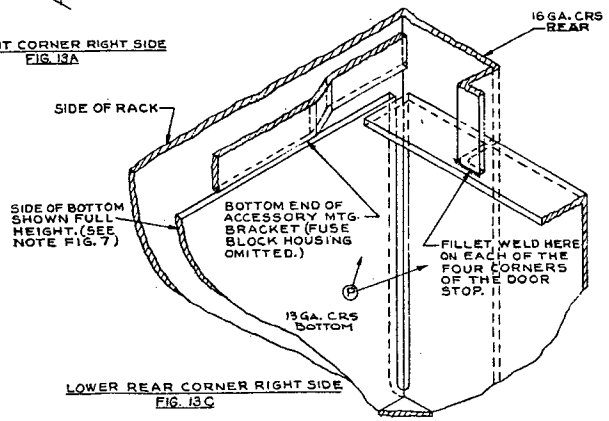


ACCESSORY MOUNTING BRACKET
TYPE IV RACK
FIG. 10



TOP FRONT CORNER RIGHT SIDE
FIG. 13A

TOP REAR CORNER RIGHT SIDE
FIG. 13B



LOWER REAR CORNER RIGHT SIDE
FIG. 13C

N.E. PLUG-IN STRIP MODIFICATION TABLE

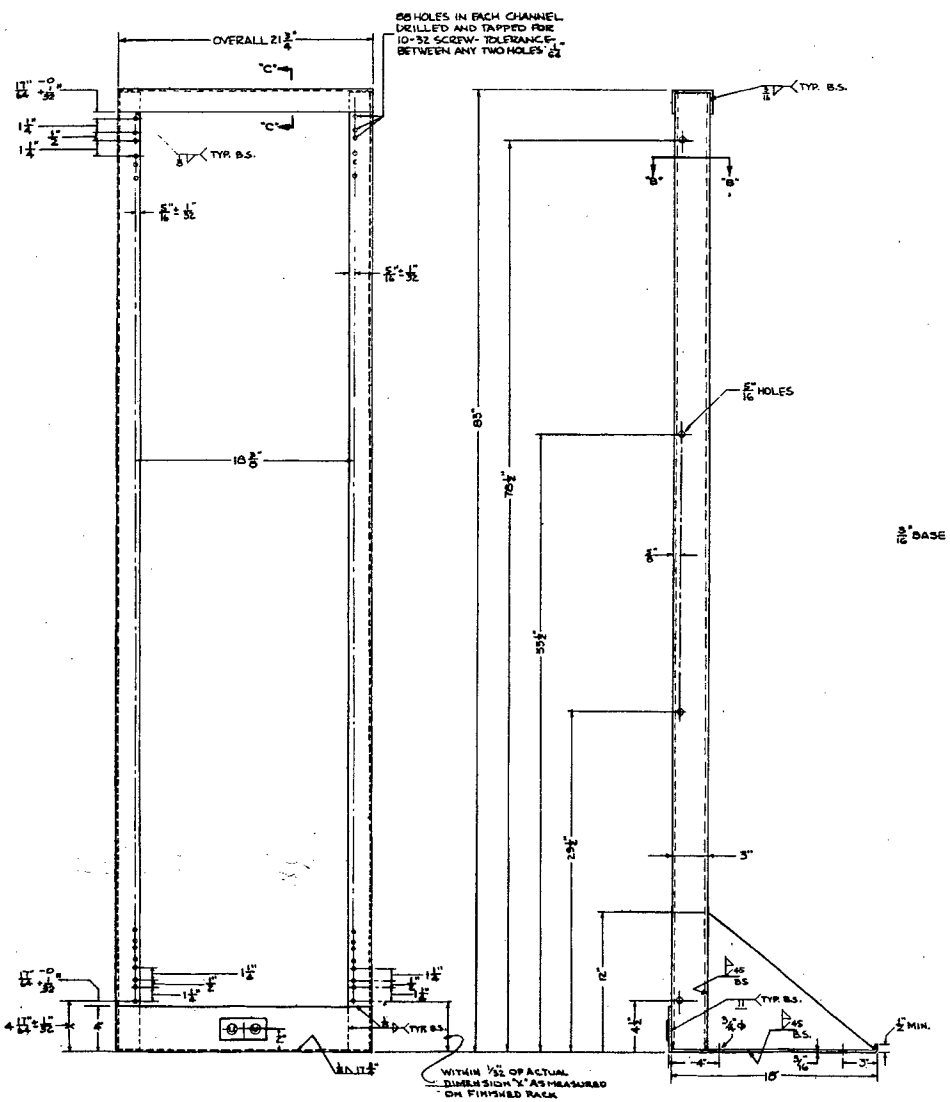
RACK TYPE	PLUG-IN STRIP BEFORE CUTTING	NO. OF OUTLETS	L ± 1/16"	QUAN. OF MTG. STRAPS	STRAP SPACING ± 1/8" STARTING 1ST STRAP AT BOTTOM		
					TO 2ND	INTER-MEDIATE	LAST
I	RCF2GW-606-6	10	58"	6	10 1/4"	12"	10 1/4
II	RCF2GW-603-6	4	22"	3	10 1/4"	—	10 1/4"
III IV	RCF2GW-606-C	11	64"	6	10 1/4"	12"	12"

N.E. PLUG-IN STRIP DETAILS
FIG. 14

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

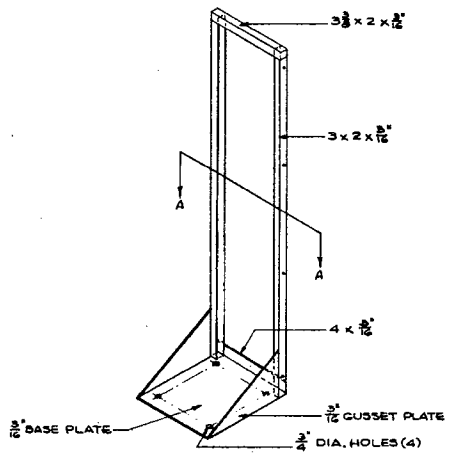
RACK, CABINET TYPE
TYPES I, II, III & IV
DETAILS

REVISED BY	SUBMITTED BY	APPROVED BY
	C.J. ANDRASCO	F.S. BAKAYE
	CHIEF, ELECTRONIC STANDARDS SECTION, RD-424	CHIEF, SYSTEM STANDARDS BRANCH, RD-420
DESIGNED BY	ISSUED BY: SYSTEMS RESEARCH AND DEVELOPMENT SERVICE, ENVIRONMENTAL DEVELOPMENT DIVISION	DATE: 12-14-67
DRAWN BY		
CHECKED BY		D-5731-3



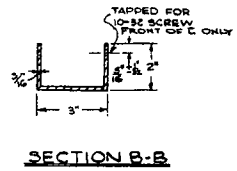
FRONT VIEW

FIGURE 25

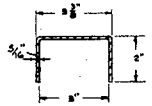


ISOMETRIC ELEVATION

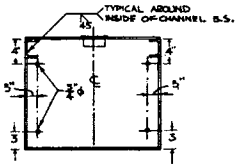
FIGURE 23



SECTION B-B



SECTION C-C



SECTION A-A

FIGURE 24

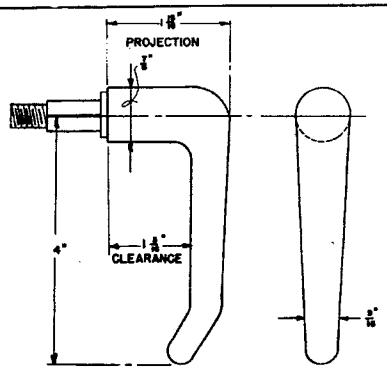
REV LTR	DATE	DESCRIPTION	CHECKED	APPROVED

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

RACK, OPEN FRAME TYPE
TYPE V
ELEVATIONS AND DETAILS

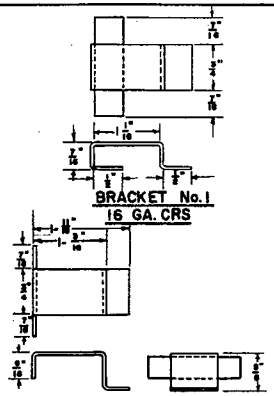
REVIEWED BY	SUBMITTED BY	APPROVED BY
	C. J. Andrasco C. J. ANDRASCO CHIEF, ELECTRONIC STANDARDS SECTION, RD-624	F. S. Sakata F. S. SAKATA CHIEF, SYSTEM STANDARDS BRANCH, RD-620

DRAWN BY	DRAWING OF	DATE	REV LTR
	SYSTEMS RESEARCH AND DEVELOPMENT SERVICE ENVIRONMENTAL DEVELOPMENT DIVISION	12-1-67	
CHECKED BY S.S. 1-4-68		DRAWING NO. D-5731-5	



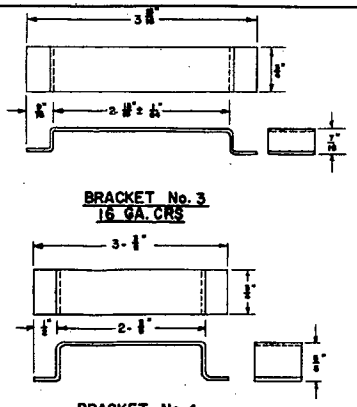
DOOR HANDLE

SCALE: 1" = 1"
(COMMERCIAL TOLERANCES)
FIG. 16



BRACKET No. 1
16 GA. CRS

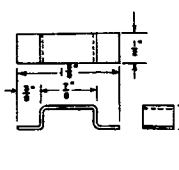
BRACKET No. 2
16 GA. CRS



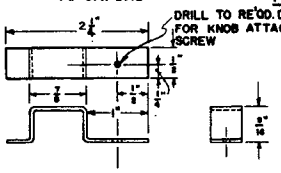
BRACKET No. 3
16 GA. CRS

BRACKET No. 4
16 GA. CRS

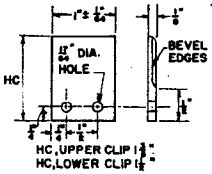
DETAILS
TRIM BRACKETS
FIG. 21



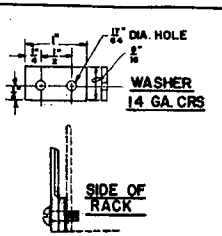
BRACKET No. 5
16 GA. CRS



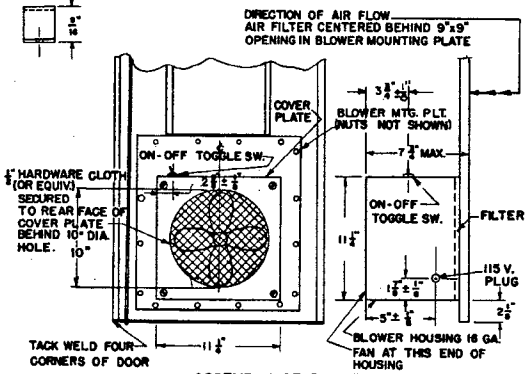
BRACKET No. 6
16 GA. CRS



DETAILS TRIM CLIP
FIG. 22



CLIP AND WASHER ASSEMBLY



ASSEMBLY OF BLOWER IN DOOR
(BLOWER OPTIONAL)
FIG. 20

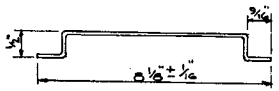
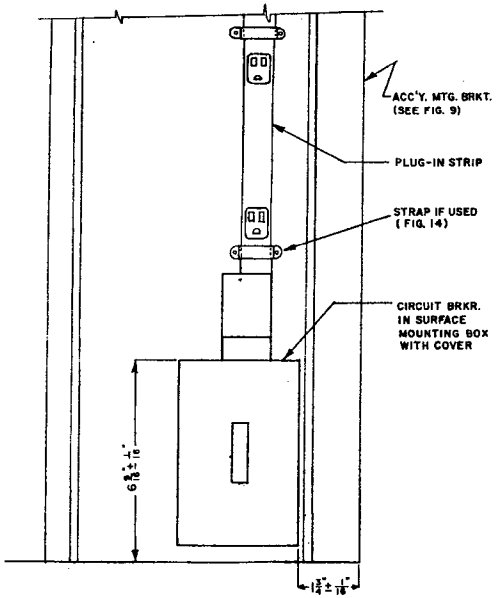
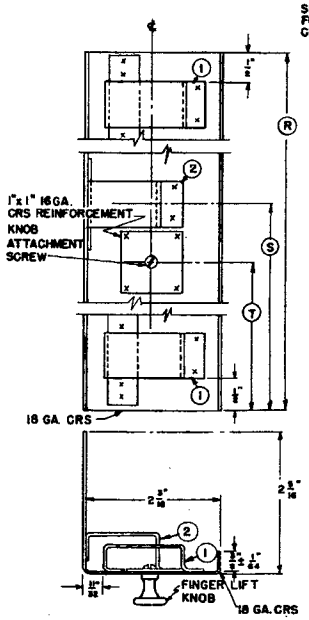


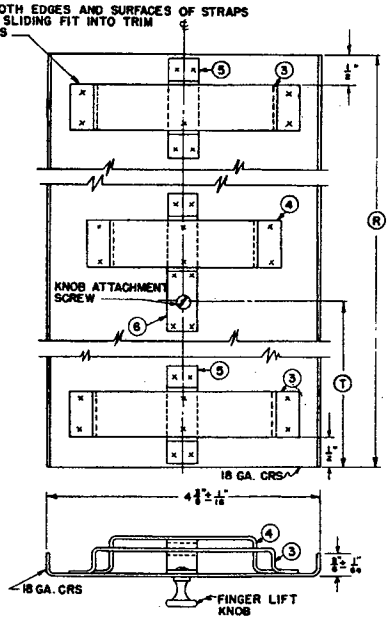
FIG. 15
DOOR STIFFENER
(H)



CIRCUIT BREAKER & PLUG-IN STRIP DETAIL
FIG. 17



CORNER TRIM DETAIL
FIG. 18



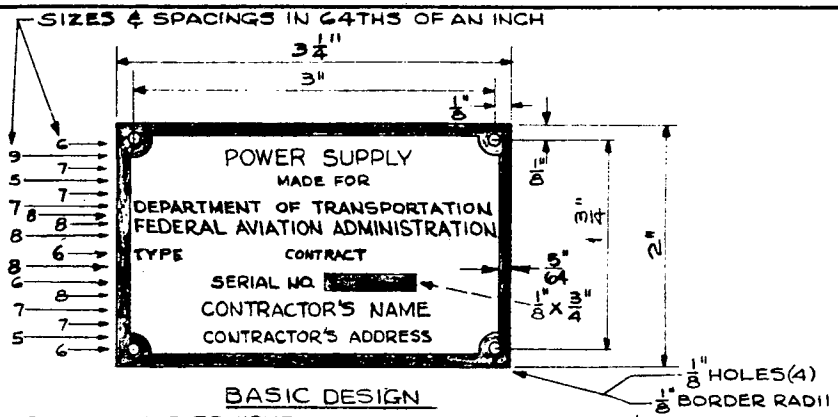
FRONT TRIM DETAIL
FIG. 19

REV. LTR.	DATE	DESCRIPTION	CHECKED	APPROVED

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

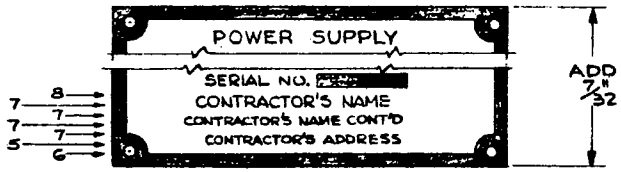
RACK, CABINET TYPE
TYPES I, II, III & IV
DETAILS

REVIEWED BY	SUBMITTED BY	APPROVED BY
	C.J. ANDRASCO	F.B. SAKATE
	CHIEF, ELECTRONIC STANDARDS SECTION, RD-424	CHIEF, SYSTEMS STANDARDS BRANCH, RD-420
DESIGNED BY	ISSUED BY	DATE: 12-14-67
DRAWN BY	SYSTEMS RESEARCH AND DEVELOPMENT SERVICE	DRAWING NO. D-5731-4
CHECKED BY	ENVIRONMENTAL DEVELOPMENT DIVISION	



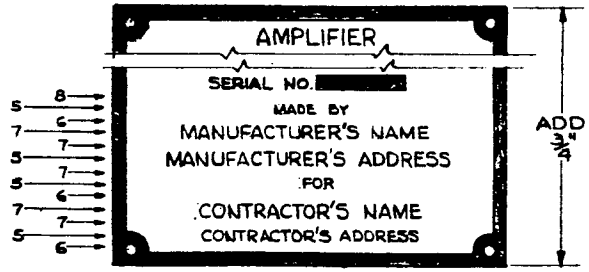
BASIC DESIGN

SINGLE-LINE EQUIPMENT TITLE AND CONTRACTOR'S NAME; NO SUB-CONTRACTOR



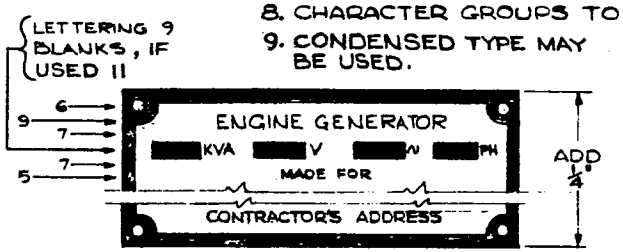
TWO LINES FOR CONTRACTOR'S NAME

(INCREASE HEIGHT OF BASIC DESIGN BY 7/32")



EQUIPMENT MADE BY SUB-CONTRACTOR

(INCREASE HEIGHT OF BASIC DESIGN BY 3/4")



TWO LINE-EQUIPMENT TITLE

(INCREASE HEIGHT OF BASIC DESIGN BY 1/4")

NOTES

1. ACCEPTABLE MATERIALS:
   0.03 INCH MIN. ALUMINUM WITH OVERALL WATER DIP LACQUER (PROHIBITED ON ENGINE GENERATORS AND EQUIPMENT INSTALLED OUT OF DOORS); OR 0.03 INCH MIN. NICKEL SILVER (ANY USE); PROCESS: REVERSE ETCHED; THE FOLLOWING TO BE RAISED, WITH DULL METAL FINISH; BORDER, SERIAL NUMBER AND RATING DATA BLANKS, AND ALL LETTERS AND NUMBERS EXCEPT SERIAL NUMBER; DEPRESSED BACKGROUND FINISHED IN BLACK ENAMEL.
   —OR—
   0.02 INCH MIN. PHOTOSENSITIVE ANODIZED ALUMINUM PROCESSED FOR WHITE METAL CHARACTERS WITH JET BLACK BACKGROUND. PHOTOSENSITIVE SILVER COMPOUNDS SHALL BE IMBEDDED WITHIN THE OXIDE LAYER, AND IMAGE SHALL BE SEALED IN OXIDE LAYER BY CHEMICAL TREATMENT (ANY USE EXCEPT PROHIBITED ON ENGINE GENERATORS).
2. SERIAL NUMBER: ENGRAVE OR DIE STAMP. ALSO APPLIES WHERE BLANKS ARE USED FOR RATING DATA (SEE TWO-LINE TITLE).
3. IF NO CONTRACT NUMBER, SUBSTITUTE "ORDER NO" FOR "CONTRACT".
4. NAME PLATE SIZE MAY BE REDUCED WHERE MOUNTING SPACE IS LIMITED. ALL DIMENSIONS AND LETTER SIZES SHALL BE REDUCED APPROXIMATELY IN PROPORTION, EXCEPT THAT HOLE SIZE, HOLE CORNER DIMENSIONS, AND MARGINAL RADII, SHALL REMAIN 1/8".
5. EQUIPMENT TITLE, TYPE DESIGNATION, AND SERIAL NUMBERS, WILL BE FURNISHED BY GOV'T. AFTER AWARD OF CONTRACT.
6. TOLERANCE ON DIMENSIONS ±0.010", EXCEPT HOLE SIZE AND HOLE-TO-HOLE SPACING ±0.005".
7. SUBCONTRACTOR NAME PLATE DESIGN IS MANDATORY WHERE EQUIPMENT IS MANUFACTURED BY SUBCONTRACTOR.
8. CHARACTER GROUPS TO BE CENTERED.
9. CONDENSED TYPE MAY BE USED.

REV.	DATE	DESCRIPTION	CHECKED	APPROVED
				9-28-67 KTO
H		MOD. FOR DOT	[illegible]	KTO
G	1-10-67	ADD ENGINE GEN. NOTES	[illegible]	[illegible]
F	12-17-66	REVISED DESIGN AND NOTES	✓	[illegible]

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C. 20590

REVIEWED BY

STANDARD NAMEPLATE

SUBMITTED BY [illegible]

APPROVED BY R. T. Ostrand
SYSTEMS STANDARDS BRANCH

DESIGNED BY F.A.B.S.

DRAWN BY E.J.B.

CHECKED BY

ISSUED BY SYSTEMS RESEARCH AND DEVELOPMENT SERVICE
ENVIRONMENTAL DEVELOPMENT DIVISION

DATE 3-15-62

DRAWING NO. B-21216-H

GPO 877-798